

PROCEEDINGS
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FIVE NEW RICE RATS OF THE GENUS *ORYZOMYS*
FROM MIDDLE AMERICA.

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The following descriptions of new species and subspecies of *Oryzomys* are published in the course of a revision of the North and Middle American forms of the genus now in progress. These represent widely differing groups, three forms being from Mexico, one from Panama, and one from Costa Rica included with other material from that country kindly loaned by Dr. J. A. Allen, Curator of Mammalogy, American Museum of Natural History.

***Oryzomys guerrerensis* sp. nov.**

Type from Omilteme, Guerrero, Mexico. No. 127,517, male adult (molars moderately worn), U. S. National Museum (Biological Survey Collection), collected by E. W. Nelson and E. A. Goldman, May 20, 1903. Original number 16,454.

General characters.—A small species similar in general to *O. melanotis*, but decidedly smaller; color darker; ears wholly black [inner sides clothed with rusty reddish hairs in *melanotis*]; skull with very low, flat braincase.

Color.—Type (fresh pelage): Upperparts ochraceous-tawny (Ridgway, 1912), purest on cheeks, shoulders and sides, the face, top of head, and back darkened by a moderate admixture of black hairs; underparts dull grayish white, the plumbeous basal color of the fur showing through; outer and inner sides of ears well clothed with deep, glossy black hairs; feet whitish, the claws of longer toes overlapped by tufts of silvery bristles; tail brownish above, irregularly flesh color below to near tip, which is dusky all around.

Skull.—Similar in general to that of *O. melanotis*, but much smaller and lighter, with more slender zygomata; braincase similarly broad, but very much lower and flatter; outer wall of antorbital foramen with anterior border more rounded and less noticeably projecting forward as viewed from above; interparietal smaller; anterior palatine foramina about as broad anteriorly as posteriorly [broader posteriorly in *melanotis*]; teeth as in *melanotis*, but smaller.

Measurements.—Type: Total length, 220; tail vertebræ, 118; hind foot, 27. *Skull* (type): Greatest length, 26.3; zygomatic breadth, 14; interorbital breadth, 4.9; length of nasals, 10.1; length of anterior palatine foramina, 4; length of palatal bridge, 5.5; length of upper molar series, 3.8.

Remarks.—Six specimens from the type locality represent a form apparently allied to *O. melanotis*, of Jalisco, but specifically distinct. The wholly black ears and remarkably flat skull are distinguishing characters.

***Oryzomys nitidus alleni* subsp. nov.**

Type from Tuís (about 35 miles east of Cartago), Costa Rica. No. $\frac{9631}{971}$, young adult male (teeth slightly worn), American Museum of Natural History, collected by George K. Cherrie, July 15, 1894.

General characters.—In external appearance closely resembling *Oryzomys nitidus nitidus*, the pelage long and very soft as in that form (hairs on back about 12 millimeters in length); skull with higher, much more fully expanded braincase.

Color.—Type: Upperparts between ochraceous-tawny and cinnamon-brown, purest on cheeks, shoulders and sides; the face, top of head, and back heavily mixed with black, the very dark basal color of the fur showing through and producing a blackish effect; underparts dull whitish; ears black, thinly clothed with very short inconspicuous hairs; feet flesh color; tail nearly unicolor, dark brownish above, slightly paler below.

Skull.—Similar in general to that of *O. n. nitidus*, but braincase much more distended; interorbital constriction about the same, but supraorbital ridges more strongly divergent and frontal region decidedly broader posteriorly; dentition about the same.

Measurements.—Type: Total length, 218; tail vertebræ, 111; hind foot, 29. *Skull* (type): Greatest length, 28.2; zygomatic breadth, 14.3; interorbital breadth, 5.5; length of nasals, 10.9; length of anterior palatine foramina, 3.5; length of palatal bridge, 5.5; length of upper molar series, 4.3.

Remarks.—Specimens from San Javier and Carondelet, northern Ecuador, some of which have been identified by Mr. Oldfield Thomas with the Peruvian form described as '*Hesperomys laticeps* var *nitidus*' have been used for comparison. The Costa Rican animal agrees with these in many essential respects; it differs most noticeably in the expansion of the braincase, the swelling extending forward between the orbits and resulting in a greater lateral development of the frontals.

The new form is named for Dr. J. A. Allen, of the American Museum of Natural History, to whom I am indebted for many courtesies.

Specimens examined.—Three, from the type locality.

***Oryzomys alfaroi dariensis* subsp. nov.**

Type from Cana, eastern Panama (altitude 2,000 feet). No. 178,660, female adult, U. S. National Museum (Biological Survey Collection), collected by E. A. Goldman, March 4, 1912. Original number 21,453.

General characters.—A small form closely allied to *Oryzomys alfaroi*; color of upper parts richer, more rufescent; skull usually narrower. Similar to *O. gracilis* and to *O. alfaroi palmiræ*, but color more rufescent and skull differing in detail.

Color.—Type: General color of upperparts near ochraceous-tawny, purest on cheeks shoulders and sides, the top of head and back suffused with tawny, finely mixed with black; underparts dull white; ears black; feet white, the four longer toes of hind feet with tufts of silvery bristles projecting beyond the claws.

Skull.—Small and slender in form, the anterior palatine foramina broad, but much shorter than palatal bridge; audital bullæ small. About like that of *O. a. alfaroi*, but braincase and frontal region usually narrower. Closely resembling that of *O. a. palmiræ*, but shorter, with more widely spreading zygomata and smaller teeth.

Measurements.—Type: Total length, 203; tail vertebræ, 107; hind foot, 25.5. Average of five adult topotypes: 220 (212–226); 113 (107–117); 24.6 (23–26). *Skull* (type): Greatest length, 27.4; zygomatic breadth, 14.5; interorbital breadth, 5; length of nasals, 11.1; length of anterior palatine foramina, 3.7; length of palatal bridge, 5.5; length of upper molar series, 3.7.

Remarks.—This small, slender rice rat differs from typical *O. a. alfaroi*, of Costa Rica, mainly in richer, more tawny coloration. It is closely allied to the Colombian form described as *O. palmiræ* and the latter is clearly assignable to subspecific rank, if it does not prove to be identical with *O. gracilis*, the type of which came from farther north in the Cauca Valley. Comparison of *O. a. dariensis* with specimens from northern Ecuador, assigned to *O. gracilis* by Mr. Oldfield Thomas, and reference to the original description of that species indicate that the two are very nearly related. The description of the color of *O. gracilis*, however, seems to apply to the Ecuadorean specimens, or to *O. palmiræ*, rather than to the Darien animal. Moreover, the skull of the new form is distinguished from that of *O. gracilis*, as here understood, by the greater lateral expansion of the zygomata.

Specimens examined.—Ten, all from the type locality.

***Oryzomys couesi regillus* subsp. nov.**

Type from Los Reyes, Michoacan, Mexico. No. 125,945, male adult, U. S. National Museum (Biological Survey Collection), collected by E. W. Nelson and E. A. Goldman, February 17, 1903. Original number 15,962.

General characters.—A large richly colored form of the *O. couesi* group, with long, soft pelage. Similar in general to *O. c. couesi* but much larger and paler colored, the underparts usually white instead of buffy. Size and proportions about as in *O. albiventer*, but upperparts darker and more rufescent in color.

Color.—Type: Upperparts in general rich ochraceous-buff, the back and rump strongly suffused with tawny and lined with black hairs; under-

parts, including lips, dull whitish; outer sides of ears blackish, the inner sides clothed with buffy hairs; feet white; tail light brownish above, whitish or flesh color below on basal half, becoming brownish all around toward tip. In other examples the underparts vary from nearly pure white to light buff.

Skull.—In general form very similar to that of *O. c. couesi*, but much larger, with heavier dentition; anterior palatine foramina about equal to palatal bridge [usually longer than palatal bridge in *O. c. couesi*], and ending posteriorly near anterior plane of first molars; interparietal relatively smaller.

Measurements.—Type: Total length, 305; tail vertebræ 169; hind foot, 36. *Skull* (type): Greatest length, 33.4; zygomatic breadth, 18.3; interorbital breadth, 5.2; length of nasals, 12.5; length of anterior palatine foramina, 6.4; length of palatal bridge, 6.4; length of upper molar series, 4.9.

Remarks.—This handsome rice rat is a member of the widely dispersed *O. couesi* group. It is closely allied to *O. albiventer*, a near geographic neighbor, and examination of specimens from intermediate localities indicates gradation through intervening forms to typical *O. c. couesi*.

Specimens examined.—Ten, all from the type locality.

***Oryzomys fulvescens lenis* subsp. nov.**

Type from Los Reyes, Michoacan, Mexico. No. 125,941, male adult, U. S. National Museum (Biological Survey Collection), collected by E. W. Nelson and E. A. Goldman, February 14, 1903. Original number 15,948.

General characters.—Similar to *Oryzomys fulvescens fulvescens* but upper parts paler ochraceous-buff, the general tone more yellowish; skull broader and more massive.

Color.—Type (fresh pelage): Upper parts in general pale ochraceous-buff, becoming warm buff on cheeks, shoulders and lower part of sides; the face, top of head and back moderately lined with dark hairs; under parts light buff, except chin and lips, which are white; outer sides of ears blackish, inner sides clothed with ochraceous buffy hairs; feet white; tail light brownish above, flesh color below proximally, becoming dusky all around toward tip.

Skull.—Broader than that of *O. f. fulvescens*; zygomata more widely spreading; maxillary arms of zygoma and ascending branches of premaxillæ broader and heavier; dentition rather heavy, but equalled in some examples of *O. f. fulvescens*.

Measurements.—Type: Total length, 198; tail vertebræ, 115; hind foot, 23. *Skull* (type): Greatest length, 22.6; zygomatic breadth, 12.3; interorbital breadth, 3.4; length of nasals, 8.6; length of anterior palatine foramina, 3.9; length of palatal bridge, 4.1; length of upper molar series, 3.

Remarks.—*Oryzomys f. lenis* is a pale form of *O. fulvescens* ranging at the lower elevations along the Pacific side of Mexico. Aside from paler coloration, it is distinguished from *O. f. fulvescens* by the broader, more massive skull.